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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,397	03/28/2001	Chiyoko Komatsu	FUJS 18.509	3810

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EXAMINER	
LEVITAN, DMITRY	

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/819,397	KOMATSU ET AL.	
	Examiner	Art Unit	
	Dmitry Levitan	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-15 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 032801.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claim 14, how to control a received signal waveform on a basis of installing slot position information. The disclosed "pre-emphasis method" is applicable to the transmitted signal only (Fig. 3A and B and pages 33, 34 of the disclosure).

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 6,256,235).

4. Regarding claims 1, 3, 4, 13, Lee substantially teaches the limitations of claim 1.

A communication node (memory device or any device comprising modules, where the signals between its modules depend on the modules location on the bus Fig. 1 and 2:41-57) comprising:

A backplane transmission circuit (an output driver with programmable pre-emphasis on Fig. 6 and 4:26-31) to transmit signals between a controller and communication units installed in plurality of slots (residing at different locations 3:7-23); and

A signal waveform control unit (program register 51, lock circuit 53 and prog. delay 55 A-C on Fig. 8 and 6:3-14) for controlling the signal waveform (amplitude and slew of DATA OUT signal 5:17-65) on the basis of position information on the said communication unit installing slots in said backplane (interrogating the modules in populated slots 7:54-67 and 8:1-6).

Lee does not teach communicating between the units installed in a plurality of slots.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Lee by adding communication between the units installed in the slots to improve the system flexibility, by adding data interchange between the modules.

5. Regarding claim 2, Lee teaches signal waveform control unit including:

An installing slot position information collecting section for collecting slot position information (Lee teaches that controller interrogates modules 13 regarding their position 7:54-60, therefore the controller inherently includes a section that performs the collection function);

A waveform correction information generating section for generating the correction corresponding to a distance of the signal to a particular slot (inherently part of the controller 11, because Lee teaches the controller setting an appropriate waveform for itself 7:60-62).

6. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee.

Lee substantially teaches the limitations of the parent claim 1.

Lee does not teach using an error correction circuit to correct errors in the signal.

Official notice is taken that using an error correction circuit to correct errors in the signal is well known and expected to ensure the error free transmission.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an error correction circuit to correct errors in the signal to the system of Lee to reduce the amount of errors in the system operating in noisy environment.

Regarding claim 11, implementing an error correction in the signal includes adding error correction information on the transmitting side and error correction circuit on the receive side.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee.

Lee substantially teaches the limitations of parent claim 1.

Lee does not teach using an extension connection section for additional units in a slot and wiring for communicating the extension units with the existing units.

Official notice is taken that using an extension connection section for additional units in a slot and wiring for communicating the extension units with the existing units is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using an extension connection section for additional units in a slot and wiring for

communicating the extension units with the existing units to the system of Lee to improve the system capacity without increasing the number of slots.

8. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee.

Lee substantially teaches the limitations of parent claims 1-4.

Lee does not teach reception circuit with a receive signal amplitude control function by using the control value.

Official notice is taken that reception circuit with a receive signal amplitude control function by using a control value is well known and used to adjust and control the receiver attenuation/gain level in accordance with the receive signal amplitude.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add reception circuit with a receive signal amplitude control function to the system of Lee to improve the system signal reception, by appropriately adjusting the receive circuit to match the amplitude pre-emphasis on the transmit side.

9. Regarding claim 15, Lee substantially teaches the limitations of claim 15.

A communication unit installed in each of plurality of slots (modules 13A-D on Fig. 1) comprising:

A transmission circuit (an output driver with programmable pre-emphasis located in modules 13A-D, as shown on Fig. 6 and 4:26-31) to transmit signals between a controller and communication units installed in plurality of slots (residing at different locations 3:7-23); and

A signal waveform control unit (program register 51, lock circuit 53 and prog. delay 55 A-C on Fig. 8 and 6:3-14) for controlling the signal waveform (amplitude and slew of DATA OUT

signal 5:17-65) on the basis of position information on the said communication unit installing slots in said backplane (interrogating the modules in populated slots 7:54-67 and 8:1-6).

Lee does not teach communicating between the units installed in a plurality of slots, including the transmission/reception circuits for the communicating.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the system of Lee in communicating between the units installed in a plurality of slots to improve the system flexibility, by adding data interchange between the modules.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Osaka	US006441638B2	Bus system and circuit board.
Noonan	US005987546A	Multiple long bus architecture having a non-terminal termination.
Tavallaci	US005938751A	Ring-back and voltage overshoot reduction techniques.
Dynneson	US004597084	Computer memory apparatus.
Birchak	US005087900	Transmission line network for multiple loads.
Williamson	US006538525B1	Voltage biased section of non-linear transmission line.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent Examiner
10/20/04.

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